



Adelanto Elementary School District

Heat Related Illness Prevention Plan

(Rev 4/30/2018)

Title 8 California Code of Regulations Section 3395

Adelanto Elementary School District

HEAT RELATED ILLNESS PREVENTION PLAN

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1. POLICY

The purpose of this program is to ensure that all Adelanto Elementary School District employees, working in outdoor places of employment or in other areas when environmental risk factors for heat illness are present, are protected from heat illness and are knowledgeable of heat illness symptoms, methods to prevent illness, and procedures to follow if symptoms occur.

2. SCOPE

The Heat Illness Prevention Program applies to all Adelanto Elementary School District employees that may be at risk of heat illness and applies to all indoor and outdoor places of employment where environmental risk factors for heat illness are present. Affected employees may include Grounds, Custodial and Maintenance.

3. DEFINITIONS

Acclimatization - The temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

- A supervisor or designee shall closely observe all employees during a heat wave. For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
- A supervisor or designee shall closely observe an employee who has been newly assigned to a high heat area for the first 14 days of the employee's employment.

Heat Illness - A serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Environmental risk factors for heat illness - Working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

Personal risk factors for heat illness - Factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affects the body's water retention or other physiological responses to heat.

Preventative recovery period - A period of time, at least five minutes, used to recover from the heat in order to prevent further heat illness.

Shade – Blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Needed when outside temperatures are above 80 degrees Fahrenheit. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.

4. RESPONSIBILITY

Risk Management – It is the responsibility of the Risk Manager to provide information and direction to managers, supervisors and staff to prevent heat illness. This may include daily heat alerts and instructions when temperatures are believed to be in excess of 80 degrees Fahrenheit.

Managers and Supervisors – It is the responsibility of managers and supervisors to ensure that all elements of this policy are implemented.

- a) Affected managers and supervisors shall attend heat training and implement heat prevention methods as required.
- b) Managers and supervisors are responsible for encouraging affected employees to drink water frequently and for reminding the employees of the steps to prevent heat illness.
- c) In the event of an employee's heat illness, supervisors and/or managers must report the incident and get medical assistance for the employee, and complete all necessary forms from Company Nurse and Workers Compensation.

Affected Employees – It is the responsibility of all affected employees to follow the established procedures to ensure their safety and prevent heat illness. Employees shall report any incident of heat illness immediately to their supervisors. Employees shall attend training as required.

5. TRAINING

Employee Training: Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- a) The environmental and personal risk factors for heat illness;
- b) The employer's procedures for complying with the requirements of this standard;
- c) The importance of close supervision of workers in their first 14 days of employment (to ensure acclimatization).
- d) The importance of acclimatization;

- e) The importance of frequent consumption of small quantities of water, **up to Four 8-ounce cups per hour**, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;
- f) The different types of heat illness and the common signs and symptoms of heat illness;
- g) The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- h) The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
- i) The employer's procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- j) The employer's procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Note: All communication for employees shall be in a form readily understandable by all affected employees.

Manager and Supervisor Training: Prior to assignment to supervision of employees working in the heat, training on the following topics shall be provided:

- a) The information required to be provided by the section above;
- b) The procedures the supervisor is to follow to implement the applicable provisions of this section.
- c) The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

6. HEAT ILLNESS PREVENTION ELEMENTS

The elements reflected within this Heat Illness Prevention plan are those contained in Title 8 of the California Code of Regulations, and consist of the following:

- A.** Provision of Water
- B.** Access to Shade/Rest Periods
- C.** Written Procedures
- D.** Training

A. PROVISION OF WATER

To ensure access to sufficient quantities of potable drinking water, the following steps will be taken:

- a) Water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Supervisors or a designated person will monitor water containers every 30 minutes, and

- employees are encouraged to report to supervisor/designated person low levels or dirty water.
- b) Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift.
 - c) Employers may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour
 - d) When drinking water levels within a container drop below 50%, the water shall be replenished immediately; or water levels should not fall below that point that will allow for adequate water during the time necessary to effect replacement.
 - e) Disposable/single use drinking cups will be provided to employees, or provisions will be made to issue employees their own cups each day.

To encourage frequent drinking of potable water, the following steps will be taken:

- a) Supervisors will provide frequent reminders to employees to drink frequently, and more water breaks will be provided.
- b) Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift.
- c) Employees shall have access to potable drinking water including but not limited to the requirements that it be fresh, pure, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working.

B. ACCESS TO SHADE/REST PERIODS

To ensure access to shade at all times, the following steps will be taken:

- a) Shade shall be present when temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all time while employees are present that are either open to the air or provided with ventilation or cooling.
- b) Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times. An individual employee who takes a preventative cool-down rest:
 - shall be monitored and asked if he or she is experiencing symptoms of heat illness;
 - shall be encouraged to remain in the shade; and
 - shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.
- c) The amount of shade present shall be at least enough to accommodate the number of employees on recovery or rest periods so they can sit in normal posture fully in the shade without having to be in physical contact with each other.
- d) The shade shall be located as close as practicable to the areas where employees are working.

- e) If other means of shade is not available, supervisors/designated person(s) will set-up an adequate number of umbrellas, canopies or other portable devices. These devices should be placed in close proximity to the work activity.
- f) Employees may have access to offices or other buildings with air conditioning.
- g) If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall provide appropriate first aid or emergency response.
- h) Every morning there will be short tailgate meetings (in a language readily understandable to the employees) to remind workers about the importance of rest breaks and the location of shade.

To ensure that employees have access to a preventative recovery period, the following steps will be taken:

- a) The employees will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than 5 minutes.
- b) Access to shade shall be permitted at all times.

C. WRITTEN PROCEDURES

To reduce the risk of heat-related illness (HI) and to respond to possible symptoms of HI, the following steps will be taken:

- a) All employees will be trained prior to working outdoors.
- b) Water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Supervisors or a designated person will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- c) Shade shall be present when temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all time while employees are present that are either open to the air or provided with ventilation or cooling.
- d) Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating.
- e) Working hours will be modified to work during the cooler hours of the day, when possible.
- f) When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.

To ensure that emergency medical services are provided without delay, the following steps will be taken:

- a) Supervisors will continuously check all employees, and stay alert to the presence of heat related symptoms.
- b) Supervisors will carry cell phones or other means of communication, such as district hand held radios, to ensure that emergency services can be called, and check that these are functional at the work site prior to each shift.

- c) Every morning, workers will be reminded about address and directions to the worksite and emergency procedures.

D. TRAINING

To ensure employees are trained, the following steps should be taken:

- a) All employees will receive heat illness prevention training prior to working outdoors, especially all newly hired employees.
- b) The employer's responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without retaliation.
- c) The concept, importance, and methods of acclimatization, pursuant to the employer's procedures.
- d) The different types of heat illness and, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.
- e) On hot days and during a heat wave, supervisors will hold short tailgate meetings to review this important information with all workers.
- f) All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow district procedures.
- g) Primary and secondary employers will ensure that all employees' working outdoors are trained in heat illness prevention.
- h) Training will be in a language readily understandable to the employee.
- i) Records of attendance (training rosters) will be kept for each training session and filed at the employees' primary reporting site.
- j) Employees must be given the opportunity to ask questions at each training session.
- k) Training records will be provided to OSHA representatives upon request.

To ensure supervisors are provided training, the following steps should be taken:

- a) Supervisors will be trained prior to being assigned to supervise outdoor workers.
- b) At or near the time of inception of this Heat Related Illness Program, supervisors will be trained in the requirements as stated above.
- c) How to monitor weather reports and how to respond to hot weather advisories.
- d) Upon promotion to a supervisory position new supervisors will be trained in the requirements stated in (a) above.
- e) The procedures the supervisor is to follow when an employee exhibits signs or reports consistent with possible heat illness, including emergency response procedures.

7. EMERGENCY RESPONSE PROCEDURES:

A. Communication

- a) Effective communication by voice, observation, or electronic means shall be maintained so that employees at the worksite can contact a supervisor or emergency medical services when necessary.
- b) An electronic device, such as a cell phone or text-messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, employer will ensure a means of summoning emergency medical services.

B. Response

Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided.

- a) If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action commensurate with the severity of the illness.
- b) If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the employer must implement emergency response procedures.
- c) An employee exhibiting signs or symptoms of heat illness shall be monitored and shall not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.

Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.

Ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

8. ACCLIMATIZATION:

- a) All employees shall be closely observed by a supervisor or designee during a heat wave. For purposes of this section only, "heat wave" means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
- b) An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.

9. HIGH HEAT PROCEDURES:

The employer shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- a) Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text-messaging device may be used for this purpose only if reception in the area is reliable.
- b) Observing employees for alertness and signs or symptoms of heat illness.

- c) The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:
 - Supervisor or designee observation of 20 or fewer employees, or
 - Mandatory buddy system, or
 - Regular communication with sole employee such as by radio or cellular phone, or
 - Other effective means of observation.
- d) Designating one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.
- e) Reminding employees throughout the work shift to drink plenty of water.
- f) Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

9. FIRST AID FOR HEAT RELATED ILLNESSES:

Heat Cramps

- a) Heat cramps are muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or the legs. It is generally thought that the loss of water and salt from heavy sweating causes the cramps.

First Aid for Heat Cramps:

- a) Have him/her stop activity and rest in a cool shady area.
- b) If he/she is fully awake and alert, have him/her drink small amounts of cool water or a commercial sports drink (water is best).
- c) Gently stretch the cramped muscle and hold for about 20 seconds, then gently massage the muscle. Repeat if necessary. If the victim has no other signals of heat-related illness, he/she may resume activity after the cramps stop.

Heat Exhaustion

- a) Heat exhaustion is the next, more serious stage of heat-related illness. It is signaled by:
 - Cool, moist, pale skin. (The skin may be red right after physical activity)
 - Headache
 - Dizziness and weakness or exhaustion.
 - Nausea
 - The skin may or may not feel hot.
- b) **First Aid for heat exhaustion:**
 - Get the person to a cooler shady area and have him/her rest in a comfortable position.
 - If fully awake and alert, give a half glass of cool water every 15 minutes, do not let him/her drink too quickly. Do Not give liquids with alcohol or caffeine in them, as they can make conditions worse.
 - **Call 911** for medical assistance if the person refuses water, vomits or loses consciousness.

Heat Stroke

- c) Heat stroke is the late stage of heat-related illness and is **life threatening**. Symptoms include
- Vomiting
 - Decreased alertness, confusion, or complete loss of consciousness
 - High body temperature (above 103 degrees F, sometimes as high as 105 degrees F)
 - Skin may still be moist or the victim may stop sweating and the skin may be red, hot and dry.
 - Rapid weak pulse.
 - Rapid shallow breathing. This stage of heat-related illness is serious and **life threatening**. **Call 911 immediately.**
- d) **First Aid for heat stroke:**
- **Help is needed fast. Call 911 for help immediately.**
 - Move person to a cooler shady area.
 - Quickly cool the body. Wrap sheets around the body and fan it. If you have access to ice packs or cold packs, wrap them in a cloth and place them on each of the victim's wrists and ankles, in the armpits and on the neck to cool the large blood vessels. (Do not use rubbing alcohol because it closes the skin's pores and prevents heat loss.) Watch for signals of breathing problems and make sure the airway is clear. Keep person lying down. Stay with him/her until medical help arrives and takes over.

8. ACCESS TO MEDICAL FACILITIES

Employees working in the field should know where the nearest emergency medical facilities, including fire stations are located. Likewise, when a field employee changes locations, he or she should know the address of the sites or landmarks nearby the work location in the event emergency medical assistance is required. If medical assistance is necessary, provide clear and precise directions to the worksite.

9. DISTRIBUTION

Distribution of the above policy/procedures includes all employees and supervisors of employees as defined in Section 2.

If anyone has questions about this plan, please contact Director of Risk Management/Benefits Josie Perez-Belcher at 760-246-8691. Our plan will be maintained by the Adelanto Elementary School District to ensure that the policies are carried out and the plan is effective.

HEAT SAFETY

Supervisor's Daily Checklist

WATER

- e) Is there plenty of fresh, cool drinking water located as close as possible to the workers?
- f) Is there a plan for refilling water coolers throughout the day?

SHADE AND REST

- Is a shade structure available at all times (regardless of the weather) for workers to rest and cool down?
- Is the shade structure up and ready when the weather is forecast is 80°F or higher?
- Do you have a plan in place for checking the weather forecast?

TRAINING

- Have workers been trained to recognize and prevent heat illness BEFORE they start working outdoors?
- Can workers identify symptoms of heat stress?
- Is there a special plan in place to allow workers to get used to the heat?

EMERGENCY PLAN

- Does everyone know who to notify if there is an emergency?
- Can workers explain their location if they need to call an ambulance?
- Does everyone know who will provide first aid?

WORKER REMINDERS

- Have workers been reminded to:
- Drink water frequently?
- Rest in the shade for at least 5-minutes as needed?
- Look out for one another and immediately report any symptoms

Heat Illness Prevention Training Points

Health Effects of Heat – Two types of Heat Illness:

<u>Heat Exhaustion</u>			<u>Heat Stroke</u>	
Dizziness	Cramps	Weakness	Red, hot, dry skin	Convulsions
Headache	Nausea	Vomiting	High Temperature	Fainting
Sweaty Skin	Fast Heart Beat		Confusion	

Watch for early symptoms. You may need medical help. People react differently – you may have just a few these symptoms, or most of them.

Stay Safe and Healthy – WATER – REST – SHADE

- Drink water even if you are not thirsty – **Every 15 Minutes** (*make sure you have enough water to provide 4 cups or One liter every hour for each person*)
- Rest in the Shade
- Watch out for each other
- Wear hats and light-colored clothing

“Easy does it” on your first days of work in the heat. You may need to get used to it. Rest in the shade – at least 5-minutes as needed to cool down.

Be Prepared For an Emergency – *Heat kills – get help right away!*

If someone on your crew has symptoms:

1. Tell the person who has a radio/phone and can call the supervisor – you need medical help.
2. Start providing first aid while you wait for the ambulance to arrive.
3. Move the person to cool-off in the shade.
4. Little by little, give him/her water (as long as he/she is not vomiting).
5. Loosen his/her clothing.
6. Help cool him/her: fan, put ice packs in groin and underarms, or soak his/her clothing with cool water.

When you call for help, you need to be prepared to:

Describe the symptoms –

Who to call? Supervisor: _____ Phone: _____ Emergency – 911

Give specific and clear directions to your worksite. Work Site Name/Address: _____

At our worksite we have: **WATER – SHADE** (*to rest and cool down*) – **TRAINING** and an **EMERGENCY PLAN**

We are extra careful when there is a heat wave or when the temperature goes up.

Acclimatization

Acclimatization means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat. In fully acclimatized individuals, sweating starts faster and the sweat carries less salt and other minerals out of the body. As a result, by sweating more efficiently the body cools down faster. Also there is less demand on the heart and cardiovascular system. For the reasons given above, *being fully acclimatized can allow workers to continue working in warm or hot conditions and decreases the risk of heat illness and unsafe acts.*

In general, physically fit individuals become acclimatized about 50% faster than those individuals who are not physically fit. Overweight individuals may retain more body heat and therefore may be more prone to developing heat illness.

To minimize the risk of heat illness, encourage employees to report to their supervisors if they have:

- Returned to work after an absence
- Recently been working in cool climate and are just now starting work in a warm or hot climate
- Had a change in their work activities, locations or conditions

Any of the above mentioned circumstances may mean that employees are not acclimatized to working in warm or hot environments, and are at greater risk for heat illness.

Make Sure Employees Are Trained, Monitored and Tracked Closely

Remember that employees who are not acclimatized to working in the heat are at greater risk for developing heat illness. Un-acclimatized employees should not work alone. It is important to:

- Train employees and supervisors on the importance of recognizing and reporting heat illness symptoms
- Have supervisors and coworkers use a "buddy system" to watch each other closely for discomfort or signs of heat illness
- Set-up a system to account for the whereabouts of your crew at appropriate intervals throughout the work shift and at the end of the work shift (e.g., keep a log of employees on your work crews including their names, supervisors, work locations, and hours worked on a given day, etc.)

Options for Acclimatizing Employees to Work in Warm or Hot Environments include One or More of the Following:

Have Employees Pace Themselves

- If they are not accustomed to working in warm or hot environments, they should start work slowly and pick up the pace gradually.

Reduce Physical Demands

- Assign employees to less physically demanding tasks during their first 14 days of working in a warm or hot environment.
- Schedule and provide frequent breaks. Supply sufficient amounts of drinking water

Start an Acclimatization Program

- These programs have employees work for progressively longer periods in warm or hot conditions where they are at risk for heat illness.
- One such program is suggested by *NIOSH (1986)*:

For employees who have previous experience at worksites where they are at risk for heat illness		For employees new to worksites where they are at risk for heat illness	
Day	# Hours Worked in Hot Environment	Day	# Hours Worked in Hot Environment
1	4	1	1.6 (96 minutes)
2	5	2	3.2 (192 minutes)
3	6	3	4.8 (288 minutes)
4	8	4	6.4 (384 minutes)
		5	8.0 (480 minutes)

Work hours may change, and we all need more water and rest.

Worksite Emergency Contact Information

EMERGENCY CALL 911	
Your Name: Your Phone:	
Supervisor Name: Supervisor Phone:	
Affected Worker(s)	
Work Site Address:	
Work Site Directions:	